Building NASA's e-learning Strategy

" Education and the internet must go hand in hand. It will serve as one of the great equalizers. When e-learning does take hold over the next two years, however, education will become a continuing process, as organizations educate their employees via the internet."
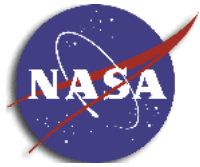
John Chambers, CEO Cisco Systems

Building NASA's e-learning Strategy

- Dell
- Cisco
- Dow
- 3Com
- GTE
- IBM
- PricewaterhouseCoopers

70% of formal learning via technology

Building NASA's e-learning Strategy

- Physical world and virtual world learning are converge: e-learning and learning will be same thing

- e-learning development skills will be the norm

- Hybrid learning solutions will be commonplace

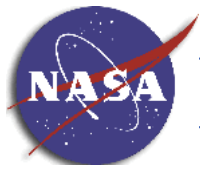- Standards of quality will be widely known

Building NASA's e-learning Strategy

- More than just building a web course

- e-learning is a new world

- Strategy calls for reinventing management development
  - as a system & process, not an event
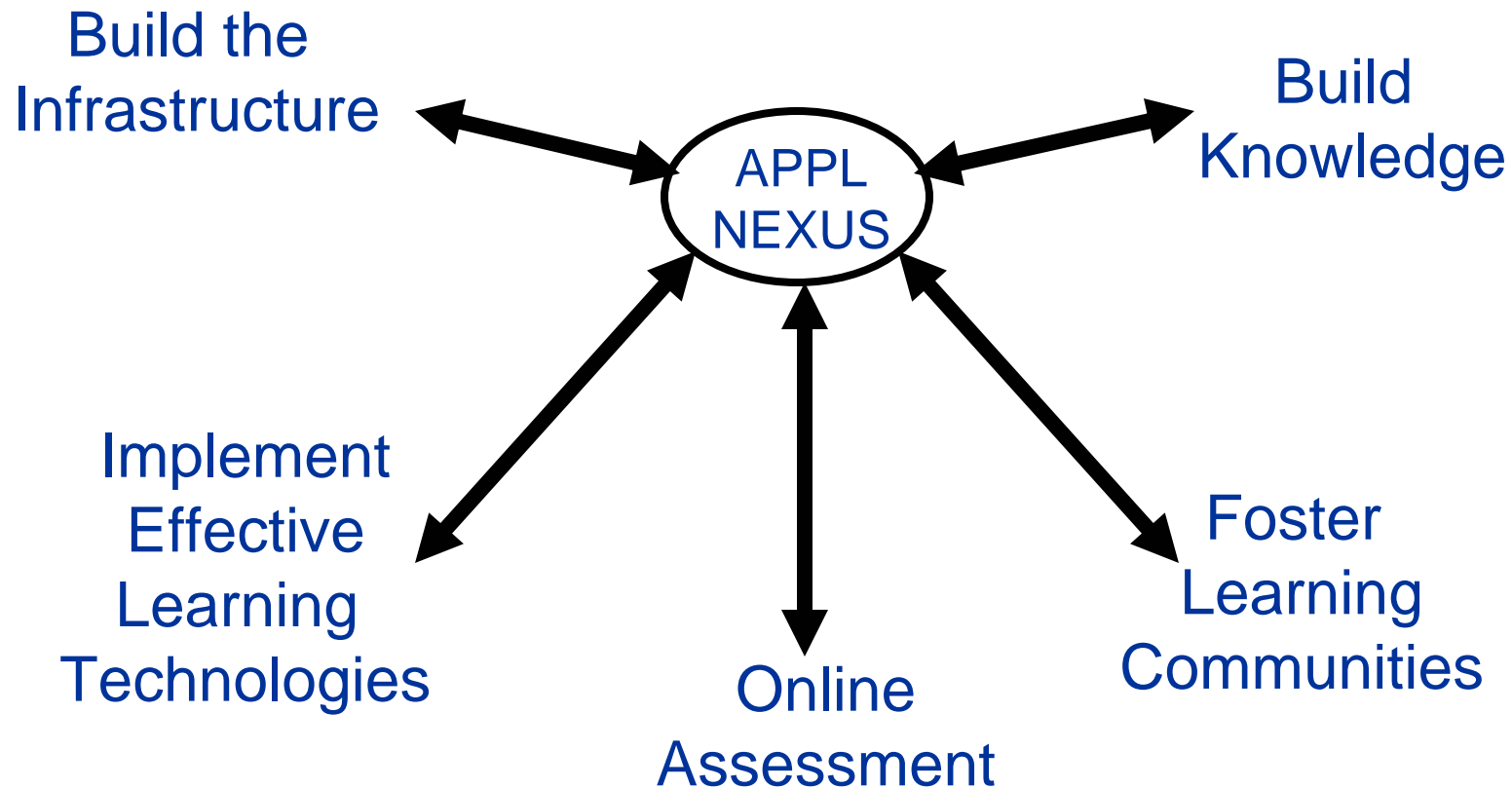 - to leverage technology to enhance learning

NASA's New Paradigm

- APPL is not just a portal to access courses

- APPL is a Learning Center
 - where learning, knowledge management and performance management converge

NASA Learning Environment

Build the Infrastructure

Build Knowledge

APPL NEXUS

Implement Effective Learning Technologies

Online Assessment

Foster Learning Communities

Building NASA's e-learning strategy

- On the web - learning delivered on NASA's intranet on demand, performance support

- Through the web - classes, coaching, tutoring through the internet

- Complimenting the web - classroom and workshop based training to provide context, depth, and hands on support
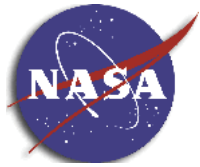
Building NASA's e-learning strategy

Key Drivers

- Speed: up to the minute knowledge
- Alignment:
  - maintain a spectrum of skills to support NASA's missions
  - stay fully aware of latest technology applications
  - track performance
- Retention
  - Employees demand easy access to training in support of career aspirations

Building NASA's e-learning Strategy

Lessons Learned

1. Be clear why you are doing this.
2. Get straight with your beliefs.
3. Re-connect with your customers.
4. Work out the operational fundamentals
5. Make sure your financial model is ready.
6. Build a transition plan.

Building NASA's e-learning strategy
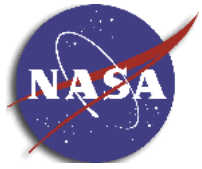
1. Be clear why you are doing this.
   - This train is leaving
   - Distribution channel play
   - Cost reduction scheme
   - Effectiveness play
     - » availability (24x7, quick access)
     - » scope (lots of stuff)
     - » control (who's in charge)

Building NASA's e-learning Strategy
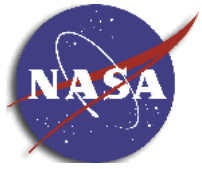
2. Get straight with your beliefs

- Learner focus vs learner control

- Knowing vs learning

- Assessment vs testing

Building NASA's e-learning Strategy

3. Re-Connect with your customer

- e-learning is not a 1-1 replacement
  - » new benefits
  - » new end users and/or usage models
  - » alternative options
- the old paradigm vs the new

Building NASA's E-learning Strategy

4. Work out the operational fundamentals

   – Baseline technologies and infrastructure

   – Staff competencies

   – IT partnership

   – Quality control

Baseline Technologies

1. 24x7 access to audio and video streaming.
2. Access to learning solutions via satellite.
3. Ability to talk online in real time with groups. (threaded discussions)
4. A way to contribute lessons learned/best practices to others. (best practices database management)
5. A way to get information anytime anyplace (on demand, just in time)
6. Ability to independently assess and measure.
7. Ability to access tools globally.
8. Ability to track learning of mobile employees.

Building APPL's e-learning strategy

IT partnerships

- Helping the IT organization
- Enterprise-wide and Global Infrastructure
  - Bandwidth
  - Access
  - Support
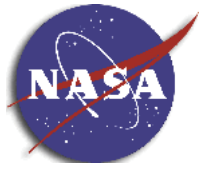
Building APPL's e-learning Strategy

Quality

- Speed
- Graphics
- Development tools
- Presentation (audio, video)
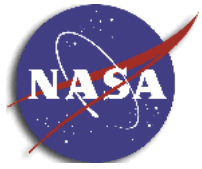- Cost/Benefit
- User experience
- Scalability

Creating APPL's e-learning Infrastructure

Build a transition plan

Cultural Change

- Labs
- How to use them
- People
- Learning community

Learning System Architecture

- Modular formats

- Interactive Communities

- Online experts and mentors

- Video and audio streaming, but also build products for low-bandwidth users

Learning System Architecture

New Tools

– Personalized Paths

– Virtual labs

– Online assessment
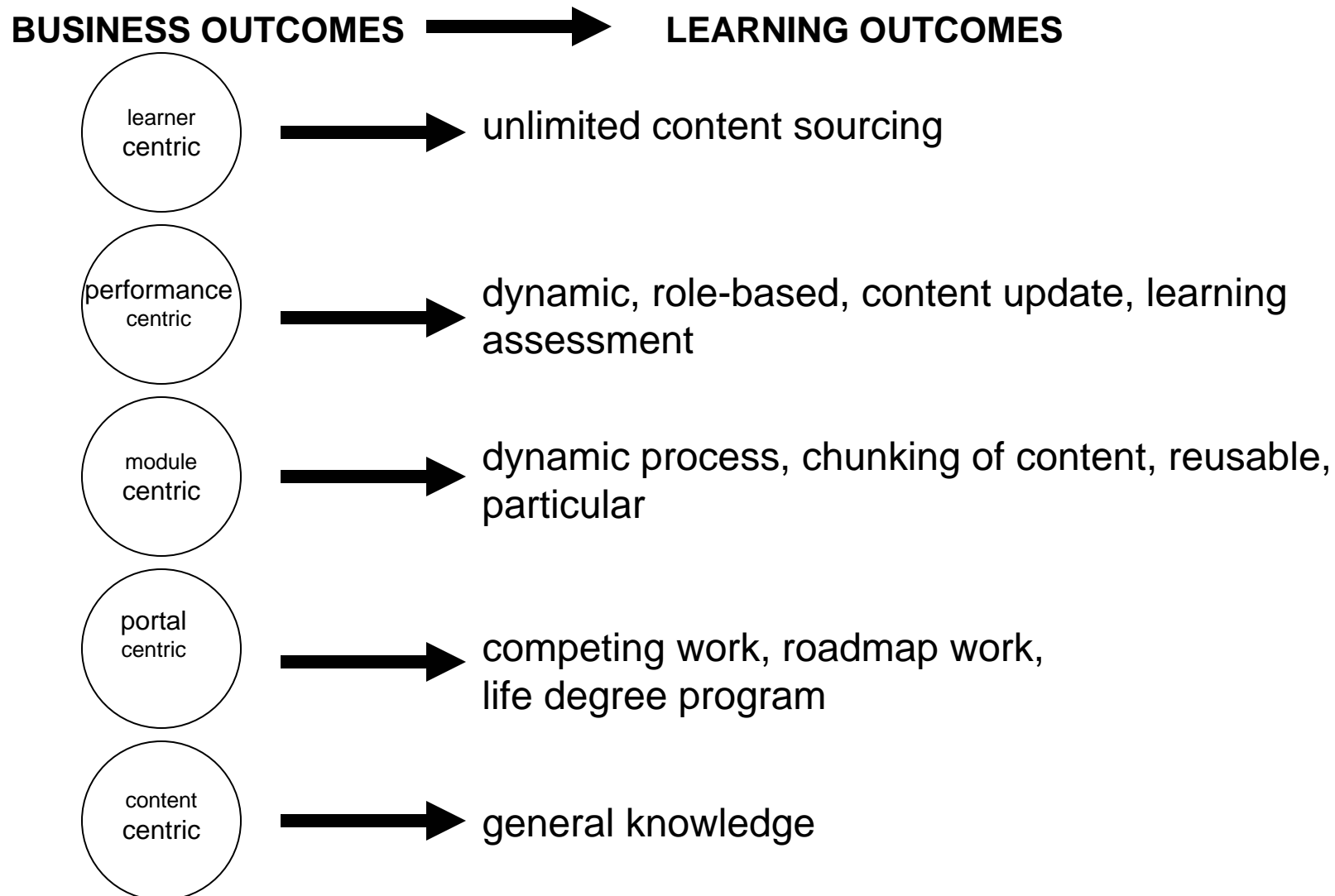
– Simulations

Learning System Architecture

Customized Learning Paths

– Portals that are:

» Audience Specific

and Learner Specific

Learning System Architecture
e-learning Migration Path:

BUSINESS OUTCOMES ➡️ **LEARNING OUTCOMES**

(learner centric) ➡️ unlimited content sourcing

(performance centric) ➡️ dynamic, role-based, content update, learning assessment

(module centric) ➡️ dynamic process, chunking of content, reusable, particular

(portal centric) ➡️ competing work, roadmap work, life degree program

(content centric) ➡️ general knowledge

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Learning System Architecture

- Competencies: observable behavior most critical to successful job performance

- Competencies: very specific training to learner's needs

- Standard outputs:
  - developmental roadmap
  - focused content

Landscape of the Future

Roadmap

 comprehensive learning solutions

 the ability to assess strengths and weaknesses at every level of the organization

Landscape of the Future

The individual:

- personalized career path

- performance assessment and tracking

- record all training activities

The Academy of Program and Project Leadership Intranet

Home
Programs and Offerings

Hot Topics

QuickLinks to Policies and Programs

Online Resources

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An Intranet Designed to Help Managers Lead

Tools, Resources, and Programs that enhance Leadership and People-Management Skills. Click Here...

What is Knowledge Management?
The Latest From Harvard Business School. In easy-to-use modules.
Click here...

Awards

The Academy of Program and Project Leadership Intranet

Learning Labs

Collaborative Learning

Interactive Learning Modules and Simulations

Lessons Learned

Manager Hot Topics

Programs and Offerings

APPL e-learning model

Learning Labs

Collaborative Learning

Team Room   Customer Room   e-Space (hubs)
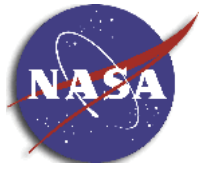
Interactive Modules and Simulations

Fundamentals of   Coaching Simulator   Leadership Competencies
Project Management   Mentor

Manager Hot Topics

Lessons Learned   Business Guidelines   Leadership Competencies
Productivity Tips

## Leadership and Team Competency Assessments

Template for NASA e-Courseware

1. A visually exciting and dramatic OPENING sets up the management context.

2. A STEP BY STEP "tutorial" with templates and guidelines takes the protagonist through the PDF lesson.

3. A SLICE OF LIFE introduces an event or problem for the protagonist to engage with or ponder.

Template for NASA eCourseware

4. A DRAMATIC MANAGEMENT
   SITUATION requires the protagonist to make
   a decision.

5.   EXERCISES are developed around the
     situation, problem, decision.

6. A VIDEO Clip of insights, experiences, lessons
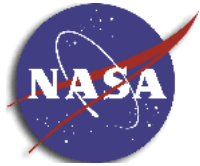   learned, from a real MPF team member.
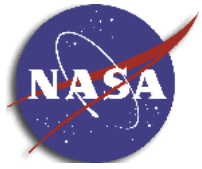
7. A REVIEW AND STATUS UPDATE shows the protagonist

- what s/he has achieved in this episode.
- where s/he is headed with the project.

8. A CLIFFHANGER coming out of review question #2 (above) spurs the protagonist on to the next episode.

NASA
e-Learning Strategy

Current Status